

Technological Innovations: Challenges for Insurance Supervisors

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Panel on Technological Innovation: Insurance Supervision and the Business of Insurance



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Innovations in value chain

- ❖ Meeting changing customer needs with new offerings.

Online Distribution - Direct to Consumer

PCW/online agencies/brokerages

policy bazaar *Stop. Compare. Save.* CoverHound Goji

next insurance policygenius

Health Insurance

Stride SimplyInsured Clover OSCAR bright HEALTH

- ❖ Using and analyzing collected data by connected devices (IoT).
- ❖ Developing new approaches to underwrite risk and predict loss.

DLT

everledger

safe share The Zen Group

Policy and Claims Management Tools/Software

enservio

Powered by snapsheet Spex



Peer-to-Peer

Lemonade GUEVARA friendsurance

On demand/Usage based

metromile CUUVGA marmalade Slice

- ❖ Enhancing and improving customer interactions: mobile & online distribution, aggregators, comparison sites.

Data & Analytics

Praedicat QuanTemplate

Analyze Re ScoreData

Social Intelligence™

- ❖ Improving claims management processes: drones, DLT.

IoT/Telematics

AUTOMATIC Health fitbit

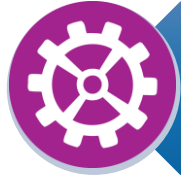
Driveway Home nest

TrueMotion

Positive implications



Reduction of transaction and operational costs



Efficiencies in claims processing



Automated data analysis and optimized pricing



Reduction of counterparty risk and frauds (DLT)



Greater financial inclusion

Potential risks: examples



Cyber

- Hacking vulnerabilities of connected devices (IoT) could increase cyber security incidents.



Market Conduct

- Differential pricing based on big data may facilitate discrimination practices.
- Digitalization in distribution of inclusive insurance may increase the risk of misinformation, fraud or abuses.



Macro Prudential

- New concentration risks may arise if a new market entrant dominates a large share of the market.
- A sudden failure or disorderly resolution of unregulated entities that provide services that emulate insurance could undermine consumer confidence in insurance itself.

Potential risks: examples



Operational

- Outsourcing parts of the value chain to new entrants should be properly managed to avoid risks of loss due to failure of third parties.



Regulatory/Legal

- Regulatory arbitrage can happen if different regulations are issued for the same technology.
- Legal uncertainties may arise in self driving vehicles, when liability shifts from drivers to auto manufacturers or suppliers of self driving kits.
- Legal and ethic considerations concerning algorithms, artificial intelligence and machine learning are important issues to be considered (robo advisors).

Evaluation of technological innovations



① Identification and description of technological innovations

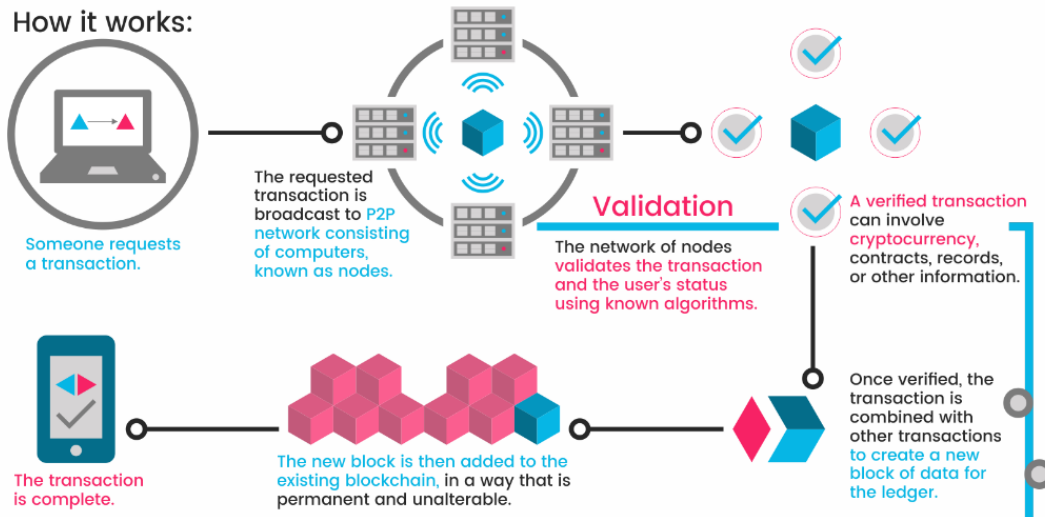
- New products, services
- Innovative companies

Examples:

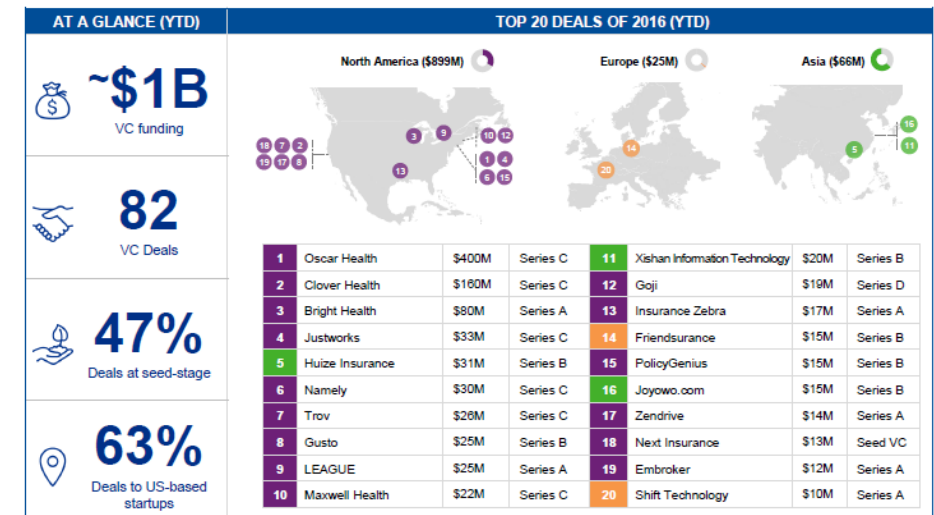
What is it?

The **blockchain** is a decentralized ledger of all transactions across a peer-to-peer network. Using this technology, participants can confirm transactions without the need for a central certifying authority. Potential applications include fund transfers, settling trades, voting, and many other uses.

How it works:



TOP 20 INSURTECH DEALS IN FIRST HALF OF 2016 TOTALED OVER \$980M IN FUNDING



Evaluation of technological innovations



② Determination of innovation drivers: supply and demand

- Cost reductions
- Efficiency improvements
- Customer changing needs
- New markets opening up
- Unmet demand

Example:

Insurance: Increasing Levels of Connectivity

Connected devices and platforms emerging across cars, homes and lifestyles present an opportunity to improve and expand the telematics insurance models



Drivers behind the emergence of connected devices



Smarter, cheaper sensors



Internet-of-things



Communication protocols



Advanced analytics

Innovations creating potential opportunities for the connected insurance model

1. Connected Cars

2. Connected Homes

3. Connected Lifestyles

Evaluation of technological innovations



③ Examination of the implications: scenario based approach

- Micro: insurance market
- Macro: financial stability, financial inclusion and consumer protection

Examples:



Scenarios

1 Adoption by established financial institutions

2 Market fragmentation as a result of FinTech

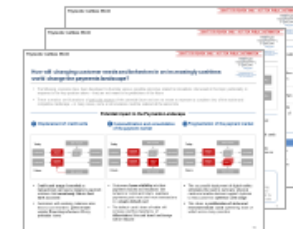
3 Absorption by BigTech

Summary

The established financial institutions adopt technological innovation and introduce these to the market in a high pace. These institutions can be domestically (1a) or foreign (1b) based.

Technological innovations are adopted primarily by FinTech companies, who use them to effectively compete with established financial institutions across the value chain. This leads to a fragmentation of the market for financial services.

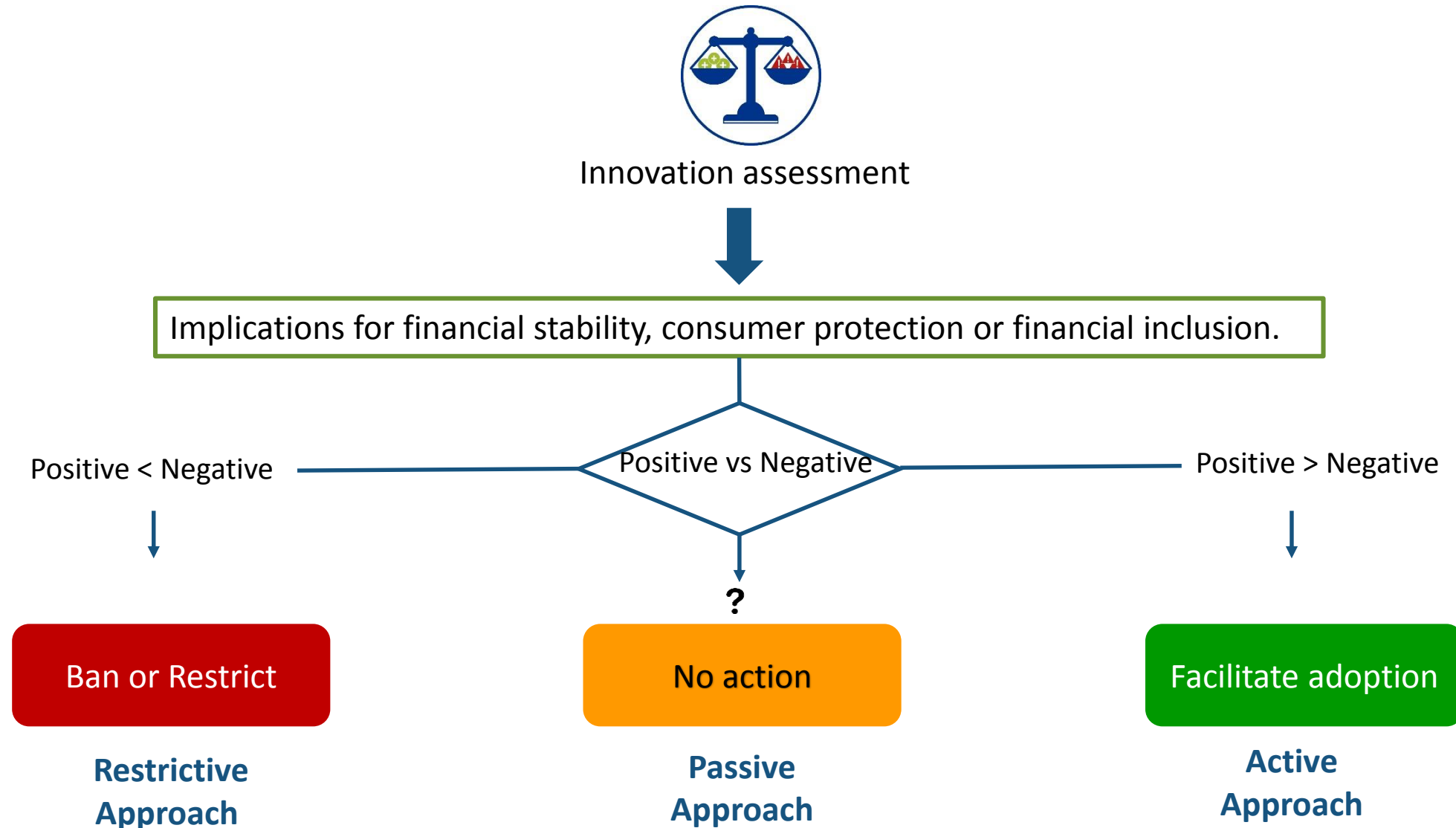
Technology giants such as Google or Apple ('BigTech') adopt innovations effectively and integrate these across the value chain. In doing so, these firms crowd out established financial institutions.



D Scenarios

- Summary of potential outcomes related to the key question for the topic in a scenario format
- Narratives and case studies to further illustrate each scenario
- Necessary conditions required for each scenario to be realised
- Implications of the scenario on customers, incumbents and overall industry
- Key opportunities and risks associated with the scenario

Regulatory approaches



Facilitating innovation



Initiative

Key ideas

Examples

Innovations Hubs



Guidance and feedback on regulatory implications of innovations.



Regulatory Sandbox/Lab



Testing innovations in a safe environment with clear boundaries and safeguards.



Objectives

- Lower cost of testing new ideas.
- Reduce risk, evaluate impact and contain consequences of failure.
- Review regulatory barriers or uncertainties.

Components

- Eligibility criteria.
- Safeguards.
- Regulatory flexibilities (temporary registration, exemptive relief, tailored license).



Accelerators



Partnership between authorities and FinTech companies for projects of direct relevance to the authorities' mission and operations.



Challenges for regulators and supervisors



1. Understanding and evaluating technological innovations



- Technological **development** is **ongoing**, and many innovations are still in a nascent phase. Supervisors need to understand **how** innovations **work** and are **applied** in order to ensure its **adequate assessment**.
- In some cases, understanding the true potential of an innovation requires **not only research but also using** the technology for real applications.

2. Establishment of principles and guidelines



- Supervisors will need to:
 - establish **guidelines** for **appropriate** and **responsible use** of new technologies.
 - define under which **principles** innovations will be **approved** for the market.
- Identification of **principles** developed by **other** national and international **regulators** as well as **issue papers** and **policy recommendations** made by **international organizations** and **standard setting bodies** are relevant for this task.

Challenges for regulators and supervisors



3. Timely adjustments to prudential regulation framework



- In order to include in the regulatory perimeter and **supervisory scope** the models of innovative insurance products, as well as new market entrants, supervisors will need to make **timely adjustments** to their prudential regulation framework, including:
 - **assessment and quantification of new risks**,
 - determination of **capital requirements** for new entrants, and
 - changes in **corporate governance** framework regarding third-party collaboration with InsurTech companies, among others.

4. Collaboration with other stakeholders and coordination with other authorities



- Supervisors will need to define their level of collaboration with stakeholders, such as **supervised institutions**, other **market participants**, **InsurTech companies**, **academics**, as well as coordination with other financial **regulators and supervisors** and **other authorities** that govern the use of **technology and communications** (participation in joint working groups, collaboration agreements, information sharing policies).

Challenges for regulators and supervisors

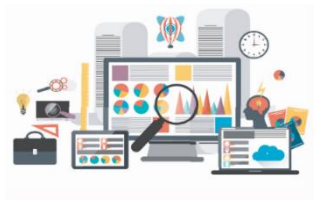


5. Financial education and data protection



- Supervisors will need to review their financial education **policies**, in order to **improve consumers understanding** of the use of new technologies, as well as to participate in adjusting the legal framework of **data privacy, ownership, protection, usage and sharing**. Additionally, a new framework could be needed to construct **information asset management systems** from the customer's point of view.

6. Adjustments to supervisors resources



- Supervisors will need to examine if **supervisory' tools and IT infrastructures** need to be improved by innovations (RegTech).
- Additionally, supervisors may need to hire, retain or develop top talent with **new technical skills** to understand in depth innovations and identify associated risks .

Challenges for regulators and supervisors



The question is not whether innovation in itself is good or bad.

The **key challenge** for regulators and supervisors is to strike a **balance** between **facilitating innovation** and **unlocking its potential benefits** to the insurance market, and **maintaining** the conditions for a fair, safe and stable insurance sector for the **benefit** and **protection** of **policyholders**.

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